IRRIGATION.

Government {1897} of Madras.

PUBLIC WORKS.

Recd. } 1897. *Enclosures*

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G.O., No. 1113 I., 13th December 1897.

DECEMBER.

Areas irrigable under the Periyar channels

Note by the Chief Engineer for Irrigation submitting, with remarks, certain correspondence relative to the —, recorded.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following papers :—

Memorandum to the Superintending Engineer, VI Circle, dated 13th March 1897, No. VI/28 M.D.

The Superintending Engineer will oblige by having a return prepared in the enclosed form showing the distributaries estimated for by the Special Executive Engineer, Periyár Works. The object of the return is to ascertain what the cost of the distributaries works out to, and what class of land it is arranged to supply, and should be made as complete as the information available permits. In the estimates which the undersigned has seen, it is believed the net area was given. The net irrigable area of dry and waste land would, probably, be not more than 80 per cent. and of tank beds 70 per cent. of the gross area.

2. It is hoped the Executive Engineer bears in mind that there will not be water for anything near the area entered in the Settlement report and that it would be inadvisable at present to supply water to waste land, which is presumably of little value if the ryots are willing to irrigate as much occupied dry land as there is water available for. It seems doubtful whether there will be water for more than 70,000 acres from June to October and 90,000 from October to February in the area commanded by the main canal.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

ENCLOSURE.

Distributary.	Amount of estimate.	Net area to be irrigated.				
		Wet.	Dry.	Waste.	Tank bed.	Total.

From the Superintending Engineer, VI Circle, dated 20th April 1897, No. 583 M.D.
To the „ „ VI „ „ 26th „ „ „ 53 M.D.

From Lieutenant-Colonel O. V. BODDY, R.E., Superintending Engineer, VI Circle, to the Chief Engineer for Irrigation, dated Trichinopoly, 7th October 1897, No. 1425 M.D.

With reference to your memo., No. VI/53 M.D., dated 26th April 1897, I have the honour to forward herewith statements of the ayacut commanded under each channel of the Periyár project, prepared by the Executive Engineer in charge of Periyár Works. I also forward copy of letter from that officer, No. 91 S.E., dated

23rd September 1897, reporting fully on the subject, and I quite agree with him as to the desirability of extending the benefits of Periyár water to the whole inam and zemin wet lands commanded by the channels and distributaries already existing or sanctioned.

Enclosures.

From T. W. S. Smyth, Esq., Executive Engineer. Periyár Works, Madura, to the Superintending Engineer, VI Circle, dated 22nd September 1897, No. 91 S.E.

I have the honour, herewith, to submit statements of land, provision for irrigating which has been or is to be made in the estimates submitted, or to be submitted, to Government as called for in memo., No. VI/53 M.D., dated 27th April 1897, of the Chief Engineer for Irrigation.

2. It will be seen that the statements for the Madura taluk give full details of the classes of lands, while those referring to Mélúr taluk only give the totals. This was unavoidable owing, partly, to the want of sufficient staff to make detailed enquiries and partly owing to the enormous number of petty tanks, the location of many of which could not be traced, as the names on the ayacut map and those in a statement supplied by the revenue authorities apparently differed considerably.

3. The areas, however, were taken off the map with considerable care by myself, and full consideration was given to the class of land, whether rocky or containing many small tanks. The proportion of new wet cultivation will be, on the whole, low under the 11th branch channel and fairly high under the 12th.

4. The important distributaries for which estimates have still to be submitted are as follows:—

(1) Tail end channel of 1st branch channel.
(2) Tail end channel of Pappagudi offtake. (These have been received from the Assistant Engineer, but require further examination and consideration.)
(3) Tail end channel of 4th branch channel.
(4) Distributaries of Chunnambur offtake.
(5) No. 11 distributary of the 12th branch channel.

5. The irrigation in the 11th reach will, with the exception of the distributary at 30 miles 6 furlongs, be left much as it is; nearly all the land is either wet land, tank bed or bare rock, and without very heavy expenditure for very small return nothing can be done beyond making arrangements for water to pass from tank to tank as quickly as possible. The upper tanks will be abandoned, and those further away from the main channel left as they are.

6. The total area of Government land commanded is 80,816 acres. In addition, however, to the area irrigated on the left bank of the river, an area of 1,474 acres under the Chittanai anicut must also be included, making a total area of 82,290 acres of Government land.

7. The main channel has been designed to carry water for 75,000 acres + irrigation under Vadagarai channel and tank = 4,632, or a total of 79,632, the quantity of water allowed being one cusec to 66 acres which is a rather high allowance.

8. In addition to the Government land, an area of whole inam and zemin wet land of 17,471 acres (paragraph 32, page 9, G.O., No. 153, dated 15th February 1892) is commanded and the whole or almost the whole of this can be supplied without further expenditure beyond that now contemplated for the existing and new channels, making a total area commanded of 82,290 + 17,471 = 99,761, which approximates very nearly to the 101,000 acres originally calculated on.

9. Comparing the 80,816 acres of Government land now commanded with the 114,518 acres reported to be irrigable in G.O., No. 153, dated 15th February 1892, I must, first of all, remark that there is a large area of lands mostly existing wet in the northern portion of Mélúr which could be irrigated if water is found sufficient, and which may or may not have been included in the 114,518 acres, as the names of the affected villages are not stated; but as regards the affected area, it is certain that the allowance of 25 per cent. for non-irrigable land is very insufficient.

10. In the area lying between the 10th and 11th branch channels north of the Madura-Mélúr road, there will be practically no new irrigation over an extent of 14 square miles, and in those parts irrigated by the 12th branch channel, there are several small hills and some large areas of uncommandable land.

11. A further reduction of the commandable area has been caused by the retention of 127 tanks as against five contemplated in G.O., No. 153. These tank beds aggregate 12,047 acres, of which 60 per cent. = 7,228 acres was considered irrigable.

12. This discharge of the tunnel has been calculated to be 1,100 cubic feet per second, though the calculation is admittedly rough owing to the position of the measuring weir.

13. It has now to be considered whether any further land, and if so, how much, can be brought under irrigation and whether it should be the inam dry lands in Madura taluk or the Government lands in Mélúr taluk.

14. Of the 82,290 acres of Government land now commanded, 9,598 + 1,474 = 11,072 acres are lands fed by the Vaigai river-spring channels, and if one may judge at all from the past two seasons, these lands should require very little Periyár water, as the effect of the Periyár has been to cause river freshes to last longer and come further down the river than they formerly did.

15. On the other hand it is found that applications for water for single crop on whole inam lands are received mostly in July and August, and that the local showers in August are sufficient to cause many of the Government tanks (which have received water) to surplus and supply the inam tanks; this, of course, will not be so much the case when the Government ryots have taken to early crops (June to August). But even then, the thorough soaking that the lands have received and the water in the tanks will certainly aid average showers to give the inam tanks some supply, and unless they are given Periyár water when they ask for it in July or early in August, they will usually dispense with it altogether.

16. For these reasons, I think we must calculate on having to supply the whole irrigable area of 99,761 (paragraph 8) which may be considered (making allowance for the old river channel supply) as equivalent to 90,000 acres ordinary irrigation.

17. Taking as a basis the proportions of old wet, dry, waste and tank bed as already provided for (*vide* statement No. I), we have the following lands commanded (to the nearest hundred) :—

	ACRES.
Old wet	40,000
Occupied dry	22,300
Waste	11,800
Tank bed	6,600
Inam wet	17,500

and the probable revenue from first-crop irrigation will be—

	Area.	Revenue. RS.
Old wet	40,000	1,08,000
Occupied dry	22,300	1,82,000
Do. waste	11,800	
Tank bed	6,600	46,000
Inam wet	17,500	70,000 (at Rs. 4)
	Total ...	4,06,000

being calculated on the same basis as those in paragraph 9, page 18 of G.O., No. 153.

18. The Vaigai river is found to be very often coming down in slight freshes bringing quantities of extremely fertile mud which is carried on to the fields (where not deposited in tanks) and it is hoped and believed that this will gradually enrich the fields and to a great extent relieve the ryots from their great difficulty—want of manure. Should this occur, it is probable that, in time, a large area of second-crop cultivation will be secured; but up to date, owing to the incompleteness of the works and the difficulty of getting the ryots to change their time of cultivation, the area sown for a short crop in June has been extremely small.

19. The ryots say, and I believe with a good deal of truth, that the lands will, without much manure, bear only one crop, and it may be said that the financial success of the project depends to a great extent upon a large area of second crop being grown and every thing possible in the way of growing leafy jungle on the Sirumalai and Alagar Covil hills to provide leaf manure, or in any other way, should be done. It might even be advisable to try the effect of guano, or artificial manures, upon the lands.

20. There is only one other point to notice. I have included wet inam lands and omitted the consideration of Government lands in the north of Mélúr. The reason for this is that the former are commanded by existing channels and are much nearer the head, while to irrigate much of the latter might require considerable alterations in the section of the main channel and would certainly require further expensive distribution works. Besides, the area that can be commanded contains a very excessive proportion of wet lands which would only average about $2\frac{1}{2}$ rupees per acre against 4 rupees for the inam lands.

21. It will be seen from the statement No. XIV, which, however, does not take into account inam lands, that the figures taken from Blue book and those now given for the irrigation to the end of each reach, although they vary considerably, correspond on the whole fairly well.

ABSTRACT Statement showing the Ayacut commanded by Periyár Main Channel.

Number.	Names of reaches.	Amount of estimate.	Ayacut commanded.							Area under each channel as per Blue book.
			Mamool waste.	Dry.	Waste lands.	Tank bed.	Total		Grand total.	
							Provided for.	Not provided for.		
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	
1	1st Reach	..	2,499·53	1,235·61	91·02	101·93	3,928·09	..	3,928·09	..
2	2nd do.	..	290·75	280·30	59·90	201·21	832·16	..	832·16	..
3	3rd do.	..	357·93	1,249·79	80·72	143·95	1,215 44	616·95	1,832·39	..
4	4th do.	..	145·89	43·24	1·71	..	190·84	..	190·84	..
5	5th do.	..	..	..	..	..	..	..	..	..
6	6th do.	..	287·96	542·59	71·18	142·00	1,043·73	..	1,043·73	..
7	7th do.	..	70·19	55·90	·37	..	126·46	..	126·46	..
8	8th do.	..	205·37	196·25	2·82	93·25	..	497·69	497·69	..
9	9th do.	..	..	..	..	..	..	..	..	..
10	10th do.	..	..	..	..	..	..	..	..	..
11	11th do.	..	..	..	..	..	2,800·00	..	2,800·00	..
	Total ..	..	3,857·62	3,603·68	307·72	682·34	10,136·72	1,114·64	11,251·36	..

CONSOLIDATED Statement showing the Ayacut commanded by Main and Branch Channels as compared with the Area as per Blue Book.

—	Area under reach direct.	Area under branch channel.	Total.	Total to end of reaches.	Project as per blue book.	
					Area.	Total to end of reaches.
	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	3,928	6,389	10,317	10,317	7,832	* 7,832
2	832	1,164	1,996	12,313	2,500	10,332
3	1,832	1,437	3,269	15,582	3,700	14,032
4	191	8,945	9,136	24,718	9,400	23,432
5	..	1,397	1,397	26,115	2,400	25,832
6	1,044	2,098	3,142	29,257	1,600	27,432
7	127	522	649	29,906	700	28,132
8	498	1,057	1,555	31,461	2,100	30,232
9	..	15,275	15,275	46,736	15,300	45,532
10	..	9,500	9,500	56,236	14,100	59,632
11	2,800	3,500	6,300	62,536	5,000	64,632
12	..	18,280	18,280	80,816	15,000	79,632

* Including 4,632 under Vadagarai channel and tank.

CONSOLIDATED Statement showing the Ayacut commanded by the Periyár Main and Branch Channels.

Number.	Names of channels.	Estimate amount.	Ayacut commanded.							Ayacut under each channel as per Blue book.
			Mamool wet.	Dry.	Waste lands.	Tank bed.	Total.		Grand total.	
							Provided for.	Not provided for.		
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
	Main channel * ..	..	3,857·62	3,603·68	307·72	682·34	10,136 72	1,114·64	11,251·36	..
1	1st Branch channel.	..	5,142·83	839·81	287·44	118·71	3,338·87	3,049·95	6,388·82	3,200
2	2nd do. ..	..	670·54	445·68	23·60	24·45	1,164·27	..	1,164 27	2,500
3	3rd do. ..	..	820·75	372·64	230·18	13·00	1,436·57	..	1,436·57	3,700
4	4th do. ..	..	3,395·30	2,909·46	1,688·75	951·12	7,104·41	1,840·22	8,944·63	9,400
5	5th do. ..	..	649·23	382·16	195·95	170·00	1,397·34		1,397·34	2,400
6	6th do. ..	..	854·49	973·26	72·66	197·41	1,907·63	190·19	2,097 82	1,600
7	7th do. ..	..	224·00	247 37	14·93	36·14	522·44	..	522·44	700
8	8th do. ..	..	679·00	314·44	5·50	58·50	1,057 44	.	1,057·44	2,100
9	9th do. ..	..	6,215·24	2,412·00	3,811·13	1,436·95	10,518·43	4,756·89	15,275·32	15,300
10	10th do. ..	..	..	..	..	..	5,000·00	4,500·00	9,500·00	14,100
11	11th do. ..	..	..	..	..	..	3,500·00	..	3,500·00	5,000
12	12th do. ..	..	..	..	..	..	16,780·00	1,500·00	18,280·00	15,000
	Total ..	..	22,509·00	12,500·53	6,637·86	3,688·62	63,864·12	16,951·89	80,816·01	75,000

* 2,800 acres not classified.

STATEMENT showing the ayacut commanded by 1st Branch Channel.

Number.	Names of channels.	Amount of estimate.	Ayacut commanded. Mamool wet.	Dry.	Waste.	Tank bed.	Total: Provided for.	Total: Not provided for.	Grand total.	Ayacut under each channel as per blue book.
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	First Branch channel up to Vadagarai tank ..	..	..	175·00	..	..	175·00	..	175·00	..
2	Vadagarai tank .	..	2,567·26	58·52	8·71	..	2,634·49	..	2,634·49	..
3	Below Vadagarai tank up to Thenur tank ..	65	286·79	179·78	42·81	20·00	529·38	..	529·38	..
4	Thenur tank and below it	..	2,288·78	426·54	235·92	98·71	..	3,049·95	3,049·95	..
	Total ..	..	5,142·83	839·84	287·44	118·71	3,338·87	3,049·95	6,388·82	..

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STATEMENT showing the ayacut commanded by 2nd Branch Channel.

Number.	Names of field channels.	Amount of estimate.	Ayacut commanded. Mamool wet.	Dry.	Waste.	Tank bed.	Total: Provided for.	Total: Not provided for.	Grand total.	Ayacut under each channel as per blue book.
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Field channel from right sluice of drop No. I ..	..	..	15·00	..	..	15·00	..	* 15·00	..
2	Distributary from proposed sluice at 0/6 mile at right bank ..	1,160	..	199·42	9·31	..	208·73	..	208·73	..
3	Proposed pipe-sluice and field channel ..	430	25·00	161·26	13·86	..	200·12	..	200·12	..
4	Kattakulam tank ..	205	645·54	70·00	0·43	24·45	740·42	..	740·42	..
	Total ..	..	670·54	445·68	23·60	24·45	1,164·27	..	1,164·27	..

* No estimate is required.

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STATEMENT showing the ayacut commanded by 3rd Branch Channel.

Number.	Names of channels.	Amount of estimate.	Ayacut commanded. Mamool wet.	Dry.	Waste.	Tank bed.	Total: Provided for.	Total: Not provided for.	Grand total.	Ayacut under each channel as per blue book.
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Right and left sluices of drop No. I	..	..	142·64	0 18	..	142·82	..	142·82	..
2	Athalai tank	..	191·15	30·00	10·00	..	231·15	..	231·15	..
3	Koilpagudy tank ..	..	290·60	100·00	70·00	..	460·60	..	460·60	..
4	Vilangudy tank ..	..	339·00	100·00	150·00	13·00	602·00	..	602·00	..
	Total ..	..	820·75	372·64	230·18	13·00	1,436·57	..	1,436·57	..

STATEMENT showing the ayacut commanded by the 4th Branch Channel.

Number.	Names of field channels.	Amount of estimate.	Ayacut commanded. Mamool wet.	Dry.	Waste lands.	Tank bed.	Total Provided for.	Total Not provided for.	Grand total.	Ayacut under each channel as per blue book.
	4th Branch Channel.	RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Distributary from right sluice of drop No. I ..	1,460	239·00	164·44	6·61	101·00	511·05	..	511·05	..
2	Distributaries in 4th Branch channel ..	1,910	163·41	460·68	72·88	85 90	782·87	..	782·87	..
3	Distributary to Pothumboo east tank ..	1,170	349·05	267·41	454·25	111·00	1,181·71	..	1,181·71	..
4	Distributary to Pothumboo west tank ..	3,450	120·54	327·28	92·80	..	550·62	..	550·62	..
5	Field channel from left sluice to drop No. 9 ..	155	..	36·03	100·41	..	136·44	..	136·44	..
6	Tail end of 4th Branch channel	..	662·00	309·96	374·26	129·00	..	1,475·22	..	..
	Total, 4th Branch channel ..	..	1,534·00	1,575·80	1,101·21	426·90	3,162·69	1,475·22	4,637·91	..
	Thandalay Offtake.									
1	Thandalay tank ..	..	262·63	120·17	4·80	..	387·60	..	..	..
2	Distributaries in Thandalay offtake ..	1,680	323·56	272·17	256·07	77·18	928·98	..	..	..
3	Distributaries in Thandalay offtake ..	640	349·11	206·38	56·67	105·04	717·20	..	..	..
4	Thiruppalai offtake ..	..	144·00	..	..	221·00	..	365·00	..	..
5	Anaiyur distributary ..	4,000	439·00	734·94	270·00	121·00	1,564·94	..	..	..
6	Tail end of Thandalay offtake	..	343·00	..	..	..	343·00	..	..	..
	Total, Thandalay offtake ..	..	1,861·30	1,333 66	587·54	524·22	3,941·72	365·00	4,306·72	..
	Grand Total ..	..	3,395·30	2,909·46	1,688·75	951·12	7,104·41	1,940·22	8,944·63	..

STATEMENT showing the ayacut commanded by the 5th Branch Channel.

Number.	Names of channels.	Amount of estimate.	Ayacut commanded. Mamool wet.	Dry.	Waste.	Tank bed.	Total Provided for.	Total Not provided for.	Grand total.	Ayacut under each channel as per blue book.
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Field channel from sluice below Pannagudy tank	..	..	70·00	..	..	70·00	..	* 70·00	..
2	Fifth branch channel ..	..	649·23	312·16	195·95	170·00	1,327·34	..	1,327·34	..
	Total ..	..	649·23	382·16	195·95	170·00	1,397·34	..	1,397·34	..

* Estimate submitted for sanction.

STATEMENT showing the ayacut commanded by the 6th Branch Channel.

Number.	Names of channels.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste.	Tank bed.	Total		Grand total.	
							Provided for.	Not provided for.		
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Distributaries from drop No. I	1,980	257·55	211·95	3·08	89·02	561·60	..	561·60	..
2	Distributary from proposed sluice from Kavanur tank	1,100	199·89	197·14	36·08	39·00	472·11	..	472·11	..
3	Field channels from proposed pipe sluice above drop at 2 miles, 1 furlong	380	..	203·39	6·53	..	209·92	..	209·92	..
4	Field channel from sluice above drop No. 5 ..	410	282·78	288·69	23·14	69·39	664·00	..	664·90	..
5	Tail end of 6th Branch channel	..	114·27	72·09	3·83	..	..	190·19	190·19	..
	Total ..	..	854·49	973·26	72·66	197·41	1,907·63	190·19	2,097·82	..

STATEMENT showing the ayacut commanded by the 7th Branch Channel.

Number.	Names of channels.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste.	Tank bed.	Total		Grand total.	
							Provided for.	Not provided for.		
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Seventh Branch channel.	1,460	224·00	247·37	14·93	36·14	522·44	..	522·44	..
		..	224·00	247·37	14·93	36·14	522·44	..	522·44	..

STATEMENT showing the ayacut commanded by the 8th Branch Channel.

Number.	Names of channels.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste.	Tank bed.	Total		Grand total.	
							Provided for.	Not provided for.		
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Eighth Branch channel.	..	679·00	200·00	3·42	58·50	940·92	..	940·92	..
2	Field channel from drop No. 1	..	..	114·44	2·08	..	116·52	..	116·52	..
	Total ..	..	679·00	314·44	5·50	58·50	1,057·44	..	1,057·44	..

STATEMENT showing the ayacut commanded by the field channel in the 9th Branch Channel.

Number.	Names of field channels.	Amount of estimate.	Ayacut commanded. Mamool wet.	Dry.	Waste lands.	Tank bed.	Total Provided for.	Total Not provided for.	Grand Total.	Ayacut under each channel as per blue book.
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Field channel from sluice in drop No. 1	500	225·49	391·31	61·38	70·65	748·83	..	748·83	..
2	Field channel from sluice in drop No. 5	170	39·84	85·62	11·76	33·65	170·87	..	170·87	..
3	Distributary channel from proposed sluice at 3 miles 3 furlongs	..	275·50	130·00	220·00	153·89	779·39	..	779·39	..
4	Field channel from sluice at 4 miles	..	..	70·00	15·00	..	..	85·00	* 85·00	..
5	Distributary channel from sluice at 5 miles	3,480	221·47	83·00	113·66	..	418·13	..	418·13	..
6	Constructing pipe sluices and excavating field channels from the same	..	..	120·00	40·00	15·00	..	175·00	175·00	..
7	Distributary from left sluice of drop No. 14	3,090	260·37	256·73	458·81	31·30	1,007·21	..	1,007·21	..
8	Distributary from right sluice of drop No. 14	1,460	296·95	35·70	11·80	..	344·45	..	344·45	..
9	Field channel from right sluice of drop No. 15	..	3·69	150·00	100·20	9·98	263·87	..	263·87	..
10	Distributary from left sluice of drop No. 15	..	84·23	73·40	105·57	..	263·20	..	263·20	..
11	Tail end of 9th Branch channel ..	..	647·99	116·00	107·39	60·00	931·38	..	931·38	..
	Total ..	..	2,055·53	1,511·76	1,245·57	374·47	4,927·33	260·00	5,187·33	..
	Chittampatty Offtake.									
1	No. 1 field channel									
2	,, 2 ,, ...	185	150·00	200·00	20·00	50·00	420·00	..	420·00	..
3	,, 3 ,, from proposed sluice									
4	No. 4 field channel	310	71·00	..	35·00	75·82	181·82	..	181·82	..
5	,, 5 ,, from proposed sluice	480	154·51	125·11	118·58	45·87	444·07	..	444·07	..
6	No. 6 field channel from proposed sluice at 2 miles ..	..	63·48	26·21	15·60	12·05	117·34	..	117·34	..
7	Distributary from right sluice of drop No. 9	850	50·25	45·14	133·65	45·86	274·90	..	274·90	..
8	Distributary from left sluice of drop No. 9	1,200	250·00	170·00	90·00	119·59	629 59	..	629·59	..
9	No. 7 field channel from proposed sluice at 3 miles 3 furlongs	120	..	20·00	10·00	..	30·00	..	30·00	..
10	Tail end of the offtake ..	..	693·00	56·60	170·00	103·26	..	1,022·86	1,022·86	..
	Total ..	..	1,432·24	643·06	592·83	452·45	2,097·72	1,022·86	3,120·58	..
	Kunnathur Offtake.									
1	Distributary from right sluice of drop No. 1	2,860	328·80	76·68	176·13	208·14	789 75	..	789·75	..
2	Field channel from left sluice of drop No. I	1,000	114·51	35·79	65·15	77·57	293·02	..	293·02	..
3	Distributary from right sluice at 1 mile 5 furlongs ..	..	176·22	35·54	231·42	45·49	488·67	..	488·67	..
4	Distributary from left sluice at 1 mile 5 furlongs	..	26·87	..	137·44	58·15	222·46	..	222·46	..
5	Field channel from right sluice at drop No. 9 and bridge ..	260	204·39	..	55·61	..	260·00	..	260·00	..
6	Distributary from left sluice of drop No. 9 and bridge ..	..	255·98	21·46	176·61	67·34	521·39	..	521·39	..
7	Proposed pipe sluice and field channels	..	..	..	175·00	..	..	175·00	175·00	..
8	Distributary to Parayankulam tank	..	400·40	..	279·90	82·00	..	762·30	762·30	..
9	Distributary to Varichiyur tank.	..	386·68	.	139·56	..	..	526 24	526·24	..
10	Tail end of the offtake ..	..	773·85	2·60	141·64	..	918·09	..	918·09	..
	Total ..	..	2,667·70	172·07	1,578·46	538·69	3,493·38	1,463·54	4,956·92	..
	Papagudy Offtake.									
1	Proposed sluice above drop No. 1 and field channel	..	59·77	85·11	394·27	7·134	..	610·49	610·49	..
2	Tail end of the offtake ..	..	..	..	..	..	..	1,400·00	1,400·00	..
	Total ..	..	59·77	85·11	394·27	71·34	..	2,010·49	2,010·49	..
	Grand Total ..	..	6,215·24	2,412·00	3,811·13	1,436·95	10,518·43	4,756·89	15,275·32	..

* Estimate not required.

STATEMENT showing the ayacut commanded by the 10th Branch Channel.

Number.	Names of channels.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste.	Tank bed.	Total		Grand total.	
							Provided for.	Not provided for.		
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	From head up to Perumal weir.	..	..	..	..	..	700	..	700	..
2	Perumal weir to Maruthur tank.	..	..	..	..	..	1,500	..	1,500	..
3	Tiruvadur offtake	..	..	..	..	..	2,300	..	2,300	..
4	Chunnumbore offtake ..	..	..	..	..	..	500	4,500	5,000	..
	Total ..	..	..	..	..	..	5,000	4,500	9,500	..

STATEMENT showing the ayacut commanded by the 11th Branch Channel.

Number.	Names of channels.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste.	Tank bed.	Total		Grand total.	
							Provided for.	Not provided for.		
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	11th Branch channel (from head to tail end) ..	..	..	..	..	..	3,500	..	3,500	..
	Total ..	..	..	..	..	..	3,500	..	3,500	..

STATEMENT showing the ayacut under the 12th Branch Channel.

Number.	Names of channels.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste.	Tank bed.	Total		Grand total.	
							Provided for.	Not provided for.		
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	12th Branch channel direct ..	..	..	..	..	..	3,720	..	3,720	..
2	No. 1 Distributary ..	..	..	..	..	..	400	..	400	..
3	,, 2 do.	..	..	..	..	..	240	..	240	..
4	,, 3 do.	..	..	..	..	..	400	..	400	..
5	,, 4 do.	..	..	..	..	..	720	..	720	..
6	,, 5 do.	..	..	..	..	..	650	..	650	..
7	,, 6 do.	..	..	..	..	..	4,750	..	4,750	..
8	,, 7 do.	..	..	..	..	..	600	..	600	..
9	,, 8 do.	..	..	..	..	..	1,000	..	1,000	..
10	,, 9 do.	..	..	..	..	..	3,500	..	3,500	..
11	,, 10 do.	..	..	..	..	..	800	..	800	..
12	,, 11 do.	..	..	..	..	..	..	1,500	1,500	..
	Total ..	..	..	..	..	..	16,780	1,500	18,280	..

STATEMENT showing the ayacut commanded by sluices, &c., in the 1st Reach, Main Channel.

Number.	Names of sluices, &c.	Amount of estimate.	Ayacut commanded. Mamool wet.	Dry.	Waste lands.	Tank bed.	Total. Provided for.	Total. Not provided for.	Grand total.	Area under each channel as per blue book.
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Irrigation sluice at 2 miles	..	9·72	2·00	..	..	11·72	..	11·72	..
2	Vadagarai channel ..	..	1,788·50	79·17	49·65	80·93	1,998·25	..	1,998·25	..
3	Irrigation sluice at 0 mile 6 furlongs ..	..	33·00	..	..	..	33·00	..	33·00	..
4	Irrigation sluice at 2 miles 3 furlongs ..	..	128·00	397·01	14·62	..	539·63	..	539·63	..
5	Tank sluice in Ramarajupuram tank ..	..	195·63	65·61	..	..	261·24	..	261·24	..
6	Irrigation sluice at 5 miles 5 furlongs ..	..	61·10	284·79	23·10	21·10	389·99	..	389·99	..
7	Sluices in Natchikulam weir	..	4·25	304·74	3·65	..	312·64	..	312·64	..
8	Tank sluice in Natchikulam tank	..	279·33	102·29	..	..	381·62	..	381·62	..
	Total ..	..	2,499·53	1,235·61	91·02	101·93	3,928·09	..	3,928·09	..

STATEMENT showing the ayacut commanded by sluices, &c., in the 2nd Reach, Main Channel.

Number.	Names of sluices, &c.	Amount of estimate.	Ayacut commanded. Mamool wet.	Dry.	Waste lands.	Tank bed.	Total. Provided for.	Total. Not provided for.	Grand total.	Ayacut under each channel as per blue book.
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Irrigation sluice at 9 miles 5 furlongs ..	..	290·75	280·30	59·90	201·21	832·16	..	832·16	..
	Total ..	..	290·75	280·30	59·90	201·21	832·16	..	832·16	..

STATEMENT showing the ayacut commanded by sluices, &c., in the 3rd Reach, Main Channel.

Number.	Names of sluices, &c.	Amount of estimate.	Ayacut commanded. Mamool wet.	Dry.	Waste lands.	Tank bed.	Total. Provided for.	Total. Not provided for.	Grand total.	Ayacut under each channel as per blue book.
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Irrigation sluice at 15 miles	..	78·44	696·73	34·04	67·39	876·60	..	876·60	..
2	Irrigation sluice at 16 miles 6 furlongs ..	..	81·31	218·06	2·91	36·56	338·84	..	338·84	..
3	Irrigation sluice at 17 miles 6 furlongs ..	..	198·18	335·00	43·77	40·00	..	616·95	616·95	..
	Total ..	..	357·93	1,249·79	80·72	143·95	1,215·44	616·95	1,832·39	..

STATEMENT showing the ayacut commanded by sluices, &c., in the 4th Reach, Main Channel.

Number.	Names of sluices, &c.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste lands.	Tank bed.	Total. Provided for.	Total. Not provided for.	Grand total.	
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Irrigation sluice at 18 miles 5 furlongs ..	..	145·89	43·24	1·71	..	190·84	..	190·84	..
	Total ..	..	145·89	43·24	1·71	..	190·84	..	190 84	..

STATEMENT showing the ayacut commanded by sluices, &c., in the 6th Reach, Main Channel.

Number.	Names of sluices, &c.	Amount of estimate.	Ayacut commanded.							Area under each channel as per blue book.
			Mamool wet.	Dry.	Waste lands.	Tank bed.	Total. Provided for.	Total. Not provided for.	Grand total.	
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS	ACS.	ACS.
1	Irrigation sluice at 22 miles	..	287·96	542·59	71·18	142·00	1,043·73	..	1,043·73	..
	Total ..	..	287·96	542·59	71·18	142·00	1,043·73	..	1,043·73	..

STATEMENT showing the ayacut commanded by sluices, &c., in the 7th Reach, Main Channel.

Number.	Names of sluices, &c.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste lands.	Tank-bed.	Total. Provided for.	Total. Not provided for.	Grand total.	
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Tank sluice in Vedar-kulam tank	..	70·19	55·90	0·37	..	126·46	..	126·46	..
	Total ..	..	70· 9	55·90	0·37	..	126·46		126·46	..

STATEMENT showing the ayacut commanded by sluices, &c., in the 8th Reach Main Channel.

Number.	Names of sluices, &c.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste lands.	Tank bed.	Total. Provided for.	Total. Not provided for.	Grand total.	
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1	Irrigation sluice at 25 miles, 6 furlongs ..	..	205·37	196·25	2·82	93·25	..	497·69	497·69	..
	Total ..	..	205·37	196·25	2·82	93·25	..	497·69	497·69	..

STATEMENT showing the ayacut commanded by sluices, &c., in the 11th Reach Main Channel.

No.	Names of sluices, &c.	Amount of estimate.	Ayacut commanded.							Ayacut under each channel as per blue book.
			Mamool wet.	Dry.	Waste lands.	Tank bed.	Total		Grand total.	
							Provided for.	Not provided for.		
		RS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	
1	Sluice at 30 miles, 6 furlongs, 100 feet ..	..	..	..	..	..	1,300	..	1,300	..
	Other sluices	..	..	..	..	..	1,500	..	1,500	..
	Total ..	..	..	..	..	..	2,800	..	2,800	..

22nd September 1897.

(Signed) T. W. S. SMYTH,
Executive Engineer, Periyár Works.

(True Copy.)

7th October 1897.

(Signed) O. V. BODDY, Lieut.-Col., R.E.,
Supg. Engineer, VI Circle.

No. 116 M.D.

With reference to the statements of areas irrigable from the Periyár channel, received with the Superintending Engineer's No. 1425 M.D., dated 7th instant, he is requested to state whether the areas entered as commanded are the net areas on which revenue will be levied, and if so, how these areas have been deduced from the gross areas. The Executive Engineer has no doubt gone very carefully into the calculations, but, as some of them may involve assumptions which are matters of opinion, he should have stated what deductions he has made from the areas which, it is supposed, were measured from the maps.

21st October 1897.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

From T. W. S. SMYTH, Esq., Special Executive Engineer, Periyár Works, to the Superintending Engineer, VI Circle, dated 2nd November 1897, No. 114 S.E.

In reply to your No. C./9 M.D., dated 30th October 1897, I have the honour to state that the areas are net areas and were calculated approximately as follows.

2. Any fairly large area of old wet land was taken in full from information supplied by the Special Deputy Collector.

3. All lands known to be uncommandable were excluded entirely.

4. Fairly large areas of dry land were taken at 75 per cent. of the total.

5. Where numerous petty tanks mixed up with dry and wet land exist five-eighths of the total area was taken, as a great number of these tanks are little more than pits with a bank and not much of their bed can be efficiently drained unless they are filled up, which would be very costly indeed.

6. It is impossible for any one to realize the aspect of the country without seeing the ayacut map and, as I shall be passing through Madras to-morrow, I will take it with me and explain how I was unable to keep rigidly to any fixed percentages, as those mentioned in paragraphs 4 and 5 had to be varied according to the amount of rock cropping up.

7. The areas of wet land and tank-bed were checked where possible by the information given in the list of tanks supplied to me, taking about 60 per cent. of the tank area as available for cultivation.

No. 1642 M.D.

Copy submitted to the Chief Engineer for Irrigation, for information, with reference to his memo., No. VI/116 M.D., dated 21st October 1897.

(Signed) O. V. BODDY, Lieut.-Col., R.E.,
Supg. Engineer, VI Circle.

15th November 1897.

No. 271 I.

Submitted to Government. It appears that the original estimate of 90,000 acres commanded by the Periyár channels inclusive of beds of tanks which it was then intended to abandon was much more nearly correct than the estimate on which the revised financial forecast was founded. Although the channels have been aligned to command a somewhat larger gross area than shown in the first designs the area now found to be irrigable is only 80,816 acres of Government land. The area of zemin and whole inam land is given in the papers accompanying G.O., No. 153, dated 15th February 1892, as 17,471 acres, but this may have been over-estimated as the area of Government land was. As far as can be seen at present, there will be a sufficient supply for all the land commanded and, if the zemindars and inamdars do not take it, additional Government land can be irrigated at slight expense for channels. In addition to the lands under the new channels, there are 1,474 acres irrigated under the Chittanai, an anicut a few miles below the Peranai. This group is now included as part of the Periyár project. All other Government channels on the south bank of the river have also been receiving an abundant supply last year and this, and a large quantity has also passed on to the Sivaganga and Ramnad zemindaries, where Government can get no benefit from it. This loss of water will decrease rapidly as irrigation from the Periyár channels extends. After experience of the present irrigation season, proposals will, if it seems safe to do so, be made for the utilization of any water which it is thought may not be required for land under existing channels.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

24th November 1897.

ORDER—No. 1113 I., dated 13th December 1897.

Recorded.

(True Extract.)

(Signed) W. HUGHES,
Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, VI Circle.
" Examiner, Public Works Accounts.
" Revenue Department.

IRRIGATION.
ACCOUNT.

Government (1897) of Madras.

PUBLIC WORKS.

Recd.	1897.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 1141 I., 22nd December 1897.

DECEMBER.

Periyar Project

Government of India letter sanctioning, with remarks, estimates aggregating Rs. 33,300 for excavating the 6th Distributary of the XII Branch Channel, —, and its five subsidiary channels, communicated to officers concerned, and the Superintending Engineer, VI Circle, directed to report when the Completion Report will be submitted

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper:—

From O. C. LEES, Esq., Under Secretary to the Government of India, Public Works Department (Civil Works—Irrigation), to the Joint Secretary to the Government of Madras, Public Works Department, Irrigation Branch, dated Calcutta, 30th November 1897, No. 304 I.

I am directed to acknowledge the receipt of the Proceedings of the Government of Madras, No. 898 I., dated the 9th October 1897, and, in reply, to communicate the sanction of the Government of India to the estimates, therewith forwarded aggregating Rs. 33,300, including Establishment and Tools and Plant charges of the cost of excavating the 6th Distributary of the XII Branch Channel, Periyár project, and its five subsidiary channels, chargeable against the Open Capital Account of the project under 49, the work being classed as remunerative.

2. I am to add that the Government of India accept the classification as remunerative of this and all other works that may be sanctioned by them before the submission of the Completion Report, on the understanding that they will be included in a separate schedule in the Completion Report, and that account will be taken of the total amount of such sanctions in discussing the financial results and general prospects of the canal as a whole in the Completion Report.

3. I am also to ask when this Completion Report may be expected and that it may be submitted at as early a date as possible.

4. The sanction accorded in paragraph 1 has been registered as No. 27 I. of 1897–98, and the plans and estimates forwarded with the Proceedings of the Madras Government under acknowledgment are returned herewith.

ORDER—No. 1141 I., dated 22nd December 1897.

Communicated to the officers concerned with reference to G.O., No. 898 I., dated 9th October 1897.

2. The sanction accorded by the Government of India is registered as No. 142 I. of 1897–98.

3. The Superintending Engineer, VI Circle, will report at an early date when the Completion Report will be submitted.

(True Extract.)

(Signed) W. HUGHES,
Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, VI Circle, with 41 enclosures.
" Examiner, Public Works Accounts.